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10/726,306	12/01/2003	Louis J. Kerofsky	SLA1188	3093

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EXAMINER
ALAM, MUSHFIKH I

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2426	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/726,306	KEROFSKY, LOUIS J.	
	Examiner	Art Unit	
	MUSHFIKH ALAM	2426	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/25/2008 have been fully considered but they are not persuasive.

Claims 1 and 4, Applicant argues that channel. Burns does not teach or suggest deriving two video data streams from a source data stream, where each of the two video data streams has a different access latency and video resolution.

The Examiner respectfully disagrees. As disclosed in Burns, a signal is separated into two separate components from a source signal. These signals are communicated through a high and low latency (delay) channel, thus it is interpreted that the two components have different delays and resolutions since they are separated for the separate channels.

Applicant further argues that there is no teaching in Hakenberg of controlling access latency by I-frame separation. Additionally, transmitting only I-frames in a system according to Burns is not related to generating two data streams with differing access latencies based on I-frame separation and resolution.

The Examiner respectfully disagrees. Inherently, the video streams of Burns contain I-frames with particular spacing between the I-frames. However, Burns does not explicitly disclose the differences in delays and resolutions as a function of the

spacing of the I-frames. Hakenburg teaches a method of sending only I-frames (no spacing). Inherently, a stream with no spacing will not have the additional frames to enhance the quality (lower resolution) and will require less bandwidth and thus deceasing the delay (lower latency). Teaching the method of Hakenburg, of sending only I-frames to the video streams of Burns will meet the current claim language.

Applicant further argues that the combination of Burns and Krishnamurthy requires modification of Burns to using a single transmission channel, wherein Krishnamurthy controls the transmission over the shared channel based on the latency requirement of various video applications. The information components of Burns are related to one application.

The Examiner respectfully disagrees. The Krishnamurthy reference is relied upon for only teaching multiplexing of the signal. The Burns reference does, in fact, teach separate transmission channels, however also teaches two separate video streams, each with differencing latencies and resolutions with the modification of Hakenberg. The only feature missing is the multiplexing aspect with is taught by Krishnamurthy. Further, Burns teaches multiplexing the signal at step 58, Krishnamurthy further distinguishes the ability to multiplex multiple signals.

Claims 3 and 5, Applicant argues that Lin teaches sending channel allocation priority data in a payload addressed to a master switch [paragraph [0049]]. This action is not monitoring.

The Examiner respectfully disagrees. The priority data may be time sensitive data, thus may be interpreted as marker frames. Further, Hakenberg's I-frames itself may be interpreted as marker frames and they denote the beginnings of the subsequent scenes.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1, 2, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al. (US 5995518) in view of Hakenberg et al. (US 2004/025184), and further in view of Krishnamurthy et al. (US 6665872).

Claim 1, Burns teaches a method associated with minimizing random-access latency to a compressed source video data stream which is characterized with one access latency and one resolution, said method comprising:

- engaging such a source video data stream (column 4, line 60-column 5, line 5, column 5, lines 39-41), and
- deriving from that engaged data stream, two downstream-deliverable video data streams that are characterized by differing, respective access latencies and resolutions (bandwidths), one of which downstream-deliverable video data streams is characterized, relatively speaking, by a low access latency and a low resolution (low bandwidth), and the other of which is characterized, in comparison, by a higher access latency and a higher resolution (high bandwidth). Higher bandwidth channels are used for higher resolution objects (column 2, lines 9-21, column 5, lines 44-61).

Burns is silent regarding a method comprising:

- wherein, relatively speaking, said low access latency is associated with more closely spaced I-frames in said one downstream-deliverable video data stream in comparison to more widely separated I-frames in said other downstream-deliverable video data stream; and
- transmitting said two, downstream-deliverable video data streams using a first communication channel, wherein said transmitting comprises multiplexing said two, downstream-deliverable video data streams.

Hakenberg et al. teaches a method comprising:

- wherein, relatively speaking, said low access latency (low channel delay) is associated with more closely spaced I-frames (only I frames, i.e. no space) in said one downstream-deliverable video data stream in comparison to more widely separated I-frames (when p and b-frames are also received) in said other downstream-deliverable video data stream (paragraphs [0011]-[0012]); and

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided transmission of only I-frames as taught by Hakenberg to the system of Burns to keep the latency to a reasonable (low) range (paragraph [0011]).

Krishnamurthy teaches a method comprising:

- transmitting said two, downstream-deliverable video data streams using a first communication channel, wherein said transmitting comprises multiplexing said two, downstream-deliverable video data streams (col. 4, lines 20-24).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a single shared communication channel with traffic control as taught by Krishnamurthy to the system of Burns, Hakenberg to control transmission of the shared communication channel when multiple compressed video stream are generated by a plurality of video applications. This enables bandwidth and latency utilization and optimization (col. 2, line 66-col. 3, line 45).

Claim 2, Burns teaches the method wherein the two downstream-deliverable data streams are time-synchronized (column 4, lines 39-41).

Claim 4 is analyzed as an apparatus of claim 1.

4. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burns et al. (US 5995518) in view of Hakenberg et al. (US 2004/0025184), and further in view of Lin et al. (US 2002/0095681).

Claim 3, note the discussion of claim 1 above.

Burns teaches a two-video-data-stream characterized prior-derived video data (column 2, lines 5-21).

Burns is silent regarding where such access latencies are differentiated by different time spacings that exist between designated video marker frames placed in the data streams, with larger spacings between such marker frames relating to larger access latencies, and with smaller such spacings between I-frames relating to smaller access latencies, said method comprising:

- seeking access to the received, two-video-data-stream characterized video data,
- in relation to said seeking, monitoring the two, associated video data streams to detect the first occurrence in either stream of a an I-frame,
- on detecting such an occurrence, selecting the associated data stream to be the source for a viewable output stream, and
- (a) if the first detected occurrence involves a I-frame in the mentioned other video data stream, ending the monitoring and selecting process, but
- (b) if the first detected occurrence involves an I-frame in the mentioned one video data stream, continuing to monitor the other video data stream to detect therein the first next occurrence of an i-frame, and on that detection taking place, switching to and selecting that other video data stream to be the source for a viewable output stream, and then ending the monitoring and selecting process.

Hackenberg teaches a method wherein designated I-frames exist relating to spacings (i.e. only I-frames or I, P, and B frames) relating to access latencies (only I-frames lowers latency and visa versa) (paragraph [0011]).

Hackenberg also teaches I frames designated with high priority associated with them (paragraph [0043]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided transmission of only I-frames as taught

by Hackenberg to the system of Burns to keep the latency to a reasonable (low) range (paragraph [0011]).

Lin teaches a method wherein

- seeking access to the received video data (multiple formats of data) (paragraph [0049]);
- in relation to said seeking, monitoring the two, associated video data streams to detect the first occurrence in either stream of a marker frame (priority data) (paragraph [0049]),
- on detecting such an occurrence, selecting the associated data stream (stream with highest priority) to be the source for a viewable output stream (viewable by access device) (paragraph [0049]); and
- if the first detected occurrence involves a marker frame (priority data denoting time-sensitive data) in the mentioned other video data stream, ending the monitoring and selecting process. If the first stream received is of the highest priority it will automatically pass it on to the reserved path (fig. 12; paragraph [0049]), but
- if the first detected occurrence involves a marker frame in the mentioned one video data stream, continuing to monitor the other video data stream (for higher priority data) to detect therein the first next occurrence of a marker frame (high priority data), and on that detection taking place, switching to and selecting that other video data stream to be the source for a viewable output stream (reserving a channel for the data with the highest priority), and then ending the monitoring and selecting process (paragraphs [0049]-[0050]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a transmission priority scheme for use with the marker frames of Lin to the I-frames of Hackenberg with the low-latency system communication system of Burns, because it allows certain types of video data (time sensitive, real-time) to be transmitted with suffering considerable delays (paragraph [0005]).

Claim 5 is analyzed as an apparatus of claim 3.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MUSHFIKH ALAM whose telephone number is (571)270-1710. The examiner can normally be reached on Mon-Fri: 8:30-18:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner, Art Unit 2426
2/12/2009

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